

**Amendment**

Applicant: Charles Richard Elliot

Serial No.: 10/023,341

Filing Date: December 17, 2001

Docket: K315.118.101

Title: TRANSIENT VOLTAGE SUPPRESSION

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REMARKS

Claims 1-17 are pending. By this Amendment, the title is amended and Figure 1 is amended.

The August 5, 2003 Office Action objected to the title and to the drawings. By this Amendment, the title is amended and element 32 of Figure 1 is labeled. Applicant submits, therefore, that the objections to the title and drawings are overcome.

The August 5, 2003 Office Action rejected claims 1-2 and 4-8 under 35 U.S.C. § 102(b) over Kirk (U.S. Patent No. 3,581,150). Applicant respectfully traverses this rejection.

Applicant submits that Kirk does not anticipate independent claim 1, because Kirk fails to disclose all of the features of claim 1. For example, claim 1 recites connecting a phase of an electrical machine, or at least one phase of a polyphase electrical machine having independent phase windings, across a supply circuit in response to detecting onset of a voltage transient, so as to absorb energy in the transient. Note, for example, lines 4-7 of claim 7. Also note line 1, which recites a method of absorbing energy.

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Kirk attempts to prevent a synchronous generator from further contributing to overvoltage on a system bus, by de-energizing the generator field winding when an overvoltage situation is detected by zener diode 70. Note column 1, lines 49-66 of Kirk. Further, as recited at column 1, lines 71-72, Kirk is "shunting the generator output to ground and concurrently maintaining the field winding de-energized." Essentially, therefore, Kirk is concerned with *de-energizing a field* winding while the overvoltage situation is present, to avoid a situation where an energized field winding would cause excitation of the stator windings, thereby further contributing to the overvoltage situation.

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This is in complete contrast to the present invention recited in claim 1, which is directed to *connecting* one or more phases of an electrical machine (for example, stator windings of the machine as distinct from the field winding in Kirk) across the supply circuit in response to detecting onset of an overvoltage situation. This is done to absorb energy arising from the overvoltage, i.e. to absorb energy in the voltage transient, as recited. Accordingly, Applicant submits that Kirk fails to anticipate claim 1.

Further, there is no reasonable adaptation of Kirk by which the claimed invention could be arrived at. In Kirk, the phase windings 12, 14 of the generator are connected to the bus by the diode rectifier stack 108, which would block any reverse current flow and prevent any energy from being dissipated in the alternator windings 12, 14. In fact, therefore, Kirk teaches away from the claimed invention. Kirk simply gives no suggestion of absorbing excess energy arising from an overvoltage situation in e.g. one or more stator windings of an electrical machine. Kirk also fails to acknowledge the need to reduce the rating (or, indeed, eliminate the presence) of e.g. transient voltage suppressors, let alone provide any avenue for accomplishing this.

In view of the foregoing, Applicant submits that independent claim 1, as well as its dependent claims 2 and 4-8, define patentable subject matter. Applicant also acknowledges, with appreciation, the indication of allowable subject matter in claims 3 and 9-17.

Accordingly, Applicant submits that this application is condition for allowance. Favorable reconsideration and prompt allowance are requested. No fees are believed due in connection with this paper, but the Commissioner is authorized to charge any fees that may be due to Deposit Account No. 500471.